

7. Gael

Program Name: Gael.java

Input File: gael.dat

You and your friend Gael have a new art project! You will be given a word and you must make a box design with it, as shown in the sample input and output.

Input: The first line will contain a single integer n ($0 < n < 100$) that indicates the number of data sets that follow. Each data set will consist of one word, on its own line, consisting of only capital letters.

Output: Output the shape created using the word given. It will be filled with spaces in the middle and the border will consist of the word multiple times. The corners should match up so that all the words are still spelled correctly, meaning certain words will have to be backwards. The two that will be backwards for this program are the word on the bottom of the box, and the word on the right side of the box. The necessary orientations of the 4 words in the design is as follows: The word on top of the box will go from left to right, the word on the left side of the box will go from top to bottom, the word on the bottom of the box will go from right to left, and the word on the right side of the box will go from bottom to top, see the sample output for clarification.

Sample input:

```
3
HELLO
WORLD
RACECAR
```

Sample output:

```
HELLO
E    L
L    L
L    E
OLLEH
WORLD
O    L
R    R
L    O
DLROW
RACECAR
A      A
C      C
E      E
C      C
A      A
RACECAR
```